

incorporated within one of subscriber units 102, the MAC data may include access requests. The MAC data is input to, e.g., a Reed-Solomon encoder 304. Reed-Solomon encoder 304 is a type of block coder and outputs  $s_1$  bits of data for every input  $r_1$  bits of input data. Since  $s_1$  is greater than  $r_1$ , Reed-Solomon encoder 304 introduces redundancy. A convolutional encoder 306 introduces further redundancy. For each  $k_1$  input bits, convolutional encoder 306 outputs  $n_1$  bits. A constellation mapper 308 assigns complex values to groups of input bits. The output of constellation mapper 308 is a series of such complex values, referred to as symbols. Each symbol represents a magnitude and phase of a carrier signal to be transmitted over the air.

### In the Claims

Please replace the pending claims with the following:

1. In a digital communication system employing a transmission medium shared among multiple users, a transmitter system comprising:

a first encoder that encodes data related to coordinating access to said transmission medium according to a first encoding scheme;

a second encoder that encodes data not related to coordinating access to said transmission medium according to a second encoding scheme; and

a control system that allocates transmission time between output of said first encoder and said second encoder; and

wherein said first encoding scheme introduces more redundancy than said second encoding scheme.

2. The transmitter system of claim 1 wherein said first encoding scheme and said second encoding scheme comprise convolutional encoding schemes and said first encoding scheme has a lower rate than said second encoding scheme.

3. The transmitter system of claim 1 wherein said first encoding scheme and said second encoding scheme comprise trellis encoding schemes and first encoding scheme has a lower rate than said second encoding scheme.